QA
901
J87
v. 24
Ja.-Ap.
1966

CONTENTS TO VOLUME 24

Part 1 January 1966

Roughness, bluntness, and angle-of-attack effects on hypersonic boundary-layer transition. H. T. Nagamatsu, B. C. Graber and R. E. Sheer *page* 1

Unsteady flow of a second-order fluid near a stagnation point. A. C. Srivastava 33

Computation and measurement of Hall potentials and flow-field perturbations in magnetogasdynamic flow of an axisymmetric free jet. David R. Otis 41

A theoretical study of non-equilibrium blunt-body flows. Raul J. Conti 65

An experimental examination of the large-eddy equilibrium hypothesis. Ian S. Gartshore 89

Inviscid hypersonic flow on cusped concave surfaces. Philip A. Sullivan 99

Analytical and numerical studies of the structure of steady separated flows. Odus R. Burggraf 113

The spanwise perturbation of two-dimensional boundary layers. S. C. Crow 153

On the analogy between thermal and rotational hydrodynamic stability. Walter R. Debler 165

The steady state exothermal hydromagnetic discontinuity for an arbitrarily orientated magnetic field. Lawrence A. Kennedy 177

The stability of a family of Jeffery–Hamel solutions for divergent channel flow. P. M. Eagles 191

Reviews

Problems in Hydraulics and Fluid Mechanics for Engineering Students 208

Mécanique Expérimentale des Fluides. Tome III. Recueil de Problèmes 208

Part 2 February 1966

Pressure distribution and mass injection effects in the transitional separated flow over a spiked body at supersonic speed. Mansop Hahn 209

Equilibrium turbulent boundary layers. G. L. Mellor and D. M. Gibson 225

The effects of pressure gradients on turbulent flow near a smooth wall. George L. Mellor 255

Torsional oscillations of a fluid sphere with a rigid boundary in a uniform magnetic field. R. A. Wentzell 275

Boundary effects in Stokes flow. W. E. Williams 285

Interfacial circulation due to surface-active agents in steady two-phase flows. D. B. R. Kenning and M. G. Cooper *page* 293

Internal waves produced by a convective layer. A. A. Townsend 307

The stability of elastico-viscous flow between rotating cylinders. Part 3. Overstability in viscous and Maxwell fluids. D. W. Beard, M. H. Davies and K. Walters 321

On the stability of forward and rearward slug flows due to the motion of a body through a perfectly conducting liquid. M. Lessen, H. M. Zien and S. Leibovich 335

Asymptotic expansions for laminar forced-convection heat and mass transfer. Part 2. Boundary-layer flows. J. D. Goddard and Andreas Acrivos. 339

A model of the undular bore on a viscous fluid. W. Chester 367

Determination of mean and dynamic skin friction, separation and transition in low-speed flow with a thin-film heated element. B. J. Bellhouse and D. L. Schultz 379

On convective instability induced by surface-tension gradients. K. A. Smith 401

Reviews

Aerodynamik der Schaufelgitter 415

Part 3 March 1966

Axisymmetric convection between two rotating disks. Iain B. Duncan 417

Experiments on the onset of thermal convection in horizontal layers of gases. H. A. Thompson and H. H. Sogin 451

Laminar flow past a sphere at high Mach number. R. T. Davis and W. J. Chyu 481

On determination of the characteristic equations for the stability of parallel flows. W. P. Graebel 497

Forced convection from a heated flat plate. S. C. R. Dennis and N. Smith 509

On the relative importance of Taylor-vortex and non-axisymmetric modes in flow between rotating cylinders. E. R. Krueger, A. Gross and R. C. Di Prima 521

Small axisymmetric contraction of grid turbulence. Mahinder S. Uberoi and Stanley Wallis 539

Motions at subcritical values of the Rayleigh number in a rotating fluid. G. Veronis 545

Viscous stratified flow towards a sink. Robert C. Y. Koh 555

The steady flow of a viscous fluid past a flat plate. S. C. R. Dennis and J. Dunwoody 577

Evolution of switch-on and switch-off shocks in a gas of finite electrical conductivity. L. TODD *page* 597

Stability of plane Couette–Poiseuille flow. MERLE C. POTTER 609

REVIEWS

Bores, Breakers, Waves and Wakes 620

Magnetohydrodynamics with Hydrodynamics, Vol. 1 622

PART 4 APRIL 1966

The starting process in a hypersonic nozzle. C. EDWARD SMITH 625

Gravity waves on water of variable depth. GEORGE F. CARRIER 641

On the principle of exchange of stabilities for the magnetohydrodynamic thermal stability problem in completely confined fluids. MICHAEL SHERMAN and SIMON OSTRACH 661

Double boundary layers in oscillatory viscous flow. J. T. STUART 673

The field boundary of two line currents in a plasma at uniform pressure. C. SOZOU 689

Use of electrochemiluminescence in visualizing separated flows. B. HOWLAND, G. S. SPRINGER and M. G. HILL 697

Magnetohydrodynamic drag on an oscillating sphere. ROBIN O. MOTZ 705

Natural convection in pools of evaporating liquids. J. C. BERG, M. BOUDART and ANDREAS ACRIVOS 721

On wave interactions in a stratified fluid. S. A. THORPE 737

The diffusion if a viscous vortex ring in a rotating fluid. J. A. JOHNSON 753

Note on edge waves in a stratified fluid. CHIA-SHUN YIH 765

Boundary dissipation of oscillatory waves. W. G. VAN DORN 769

On the flow due to a rotating disk. EDWARD R. BENTON 781

A theory of transversely isotropic fluids. S. J. ALLEN and C. N. DESILVA 801

Numerical experiments with free convection in a vertical slot. J. W. ELDER 823

REVIEWS

Non-linear Wave Propagation with Applications to Physics and Magnetohydrodynamics 844

INDEX TO VOLUME 24 846